



Case Studies on Higg Index Score Improvements

July 17th - 2020

Leadership & Sustainability

Meet our Speakers

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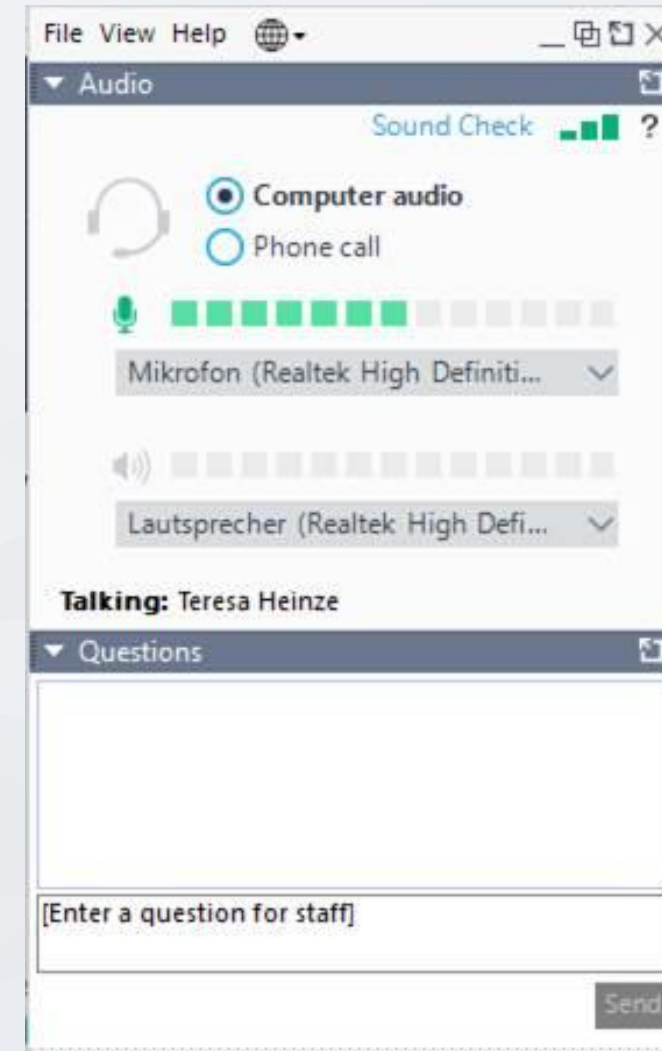
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Using GoToWebinar

Control Panel

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Type your question

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Agenda

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1. Scoring in Higg FEM
2. EMS
3. ENERGY & GHG
4. WATER
5. WASTE WATER
6. AIR
7. WASTE
8. CHEMICALS
9. FEM training and Verification offer
10. About Leadership & Sustainability



Scoring in Higg FEM

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Level 3 Aspirational

Leading Practices

Level 2 Progressive

Setting Targets and Tracking progress

Level 1 Foundational

Awareness and understanding of sources and systems

Level 1

All answer yes or
partial yes

Level 2 and 3 will
be shown

No

Level 2 and 3 will
not be shown

1. Environmental Management System

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Environmental Responsibilities	25	Q7	Environmental Strategy Review	50	Q9	Awareness of Environmental Strategy	25
Q2	Environmental Strategy		Q8	Technical Competency of responsible Individuals		Q10	Subcontractor Engagement	
Q3	Environmental Impact and Aspect					Q11	Work on Local Context	
Q4	Review Environmental Permit					Q12	Upstream Supplier Engagement	
Q5	Monitor Environmental Laws and Regulations							
Q6	Maintenance Schedule							

1. EMS – Case Study - 1

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Challenge

- Facility does not have an EMS and is at Level 1
- Facility has an opportunity to further gain 50 points in EMS with a strategy review and ensuring competency development of their environmental team



Solution

- Complete all the questions to level 1
- Design a short and long term EMS strategy with objectives and achievement duration.
- Review the strategy every 6 months
- Define competency levels for the EMS team



Benefit

- Completing level 2 gives the facility the opportunity of increasing the score in the section by 50 points
- Identifying the correct competency development strategy for the team builds both the organization and team skill set.

Q7. Environmental Strategy Review

Environmental strategy 2025. The baseline year is 2019.

Eg:

- Establish a supply chain management approach, cascading Higg FEM to the next tier of suppliers (up streams).
- Save 10% energy per produced unit of product.
- Save 5% water per employee.
- Recycle 20% of the wastewater by installing an Ultrafiltration treatment step
- Improve waste separation and reduce the amount of hazardous waste by 5% per produced unit of product.
- Implement ZDHC MRSL (Manufacturing Restricted Substances List).



EMS – Case Study - 2

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Challenge

- Facility has completed Level 2
- Facility has an opportunity to further gain points in EMS with
 - a) Subcontractor engagement
 - b) Work in local context
 - c) Upstream supplier engagement



Solution

- Subcontractor Evaluation and prioritization devised
- EMS training inclusion for relevant subcontractors factored into the facilities training schedule
- Identification of community service initiatives
- Upstream supplier engagements and sharing of Higg modules of relevant suppliers



Benefit

- Leverage the Higg FEM and communicate why environmental performance matters to your business with subcontractors, and upstream suppliers work with them to evaluate their own performance, monitor impacts, and improve
- Build engagement with people, businesses, and organizations in the community around your facility on environmental practices and improvement.

EMS – Case Study - 2

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Q10. Subcontractor Engagement

[Company Logo]		Subcontractor Evaluation - [Company Name]															
Ref: [Document Reference Number]																	
Compiled by : [Department/ Personnel]																	
Last updated/reviewed date : [Date]																	
No	Name of Subcontractor	Department/s Involved	Date of Onboarding	Internal Score (Updated Q2)	Date of last contract	Scoring						Final Score	Comments and remarks	EMS Training	Higg Index Score	Engagement/ Training Plan	Representatives
						Price	Quality	Delivery	Commitment Schedule	Flexibility	Communication			Identification			
1	EXAMPLE: Enter name of Subcontractor			Enter Score as per last Quarter	Enter when last contract was awarded									(Yes/NO)		Once Every 6 months	1.Name of personnel 2.Name of Personnel

Q12. Upstream Supplier Engagement

- Chemical suppliers*
- Raw material suppliers
- Other, please describe

* **Note:** Currently, the How to Higg Guidance includes chemical suppliers in this category, however, please note FEM Higg engagement is generally not designed for this type of upstream manufacturer and that chemical suppliers will be removed from the How to Higg Guidance for this question during the next revision cycle.

2. Energy & GHG

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Energy- Scoring

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Energy Source Identification & Tracking	50	Q2	Baseline setting of Energy Use	50	Q7	Greenhouse gas (GHG) Scope 3- Calculation	0
			Q3	Energy Use Ranking				
			Q4	Energy Reduction Target				
			Q5	Energy Implementation Plan				
			Q6	Energy Improvement Comparison				

Energy – Case Study

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Challenge

- Setting values to energy reduction target



Solution

- Identified the investments required to bring in energy improvements:
 - a) Waste heat recovery
 - b) Check for improving boiler efficiency
 - c) Maintain steam traps and steam system
 - d) Insulate equipment and tanks



Benefit

- Once identified and pay back period is costed the facility can then decide on the plan of how to set the targets both short term and long term for energy reduction

Energy – Case Study

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- Waste heat recovery boilers are designed to recover heat from waste flue gases



Further Info:

<https://www.prometheanenergy.com/case-study-textile-sme-in-south-india.html>

Energy – Case Study

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- Install variable frequency drive motors on sewing machines.
- Pay back is less than 2 years
- Cuts energy use between 50-70%



Energy – Case Study

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- Switch from T8 to T5 HO lamps
- Redesign the lighting layout in the factory to reduce the electricity consumption by 20-25%



3. Water

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Water- Scoring

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Water Source Identification & Tracking	25	Q2	Baseline Setting	50	Q7	Water Balance Analysis	25
			Q3	Water Use Ranking				
			Q4	Water Reduction Target				
			Q5	Water Implementation Plan				
			Q6	Water Improvement Comparison				

Water – Case Study

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Challenge

- Setting values to water reduction target



Solution

- Identify the investments required to bring in water saving:
 - Installation of water meters
 - Rain water Harvesting
 - Countercurrent rinse technique
 - Investment into low liquor ratio dyeing machines



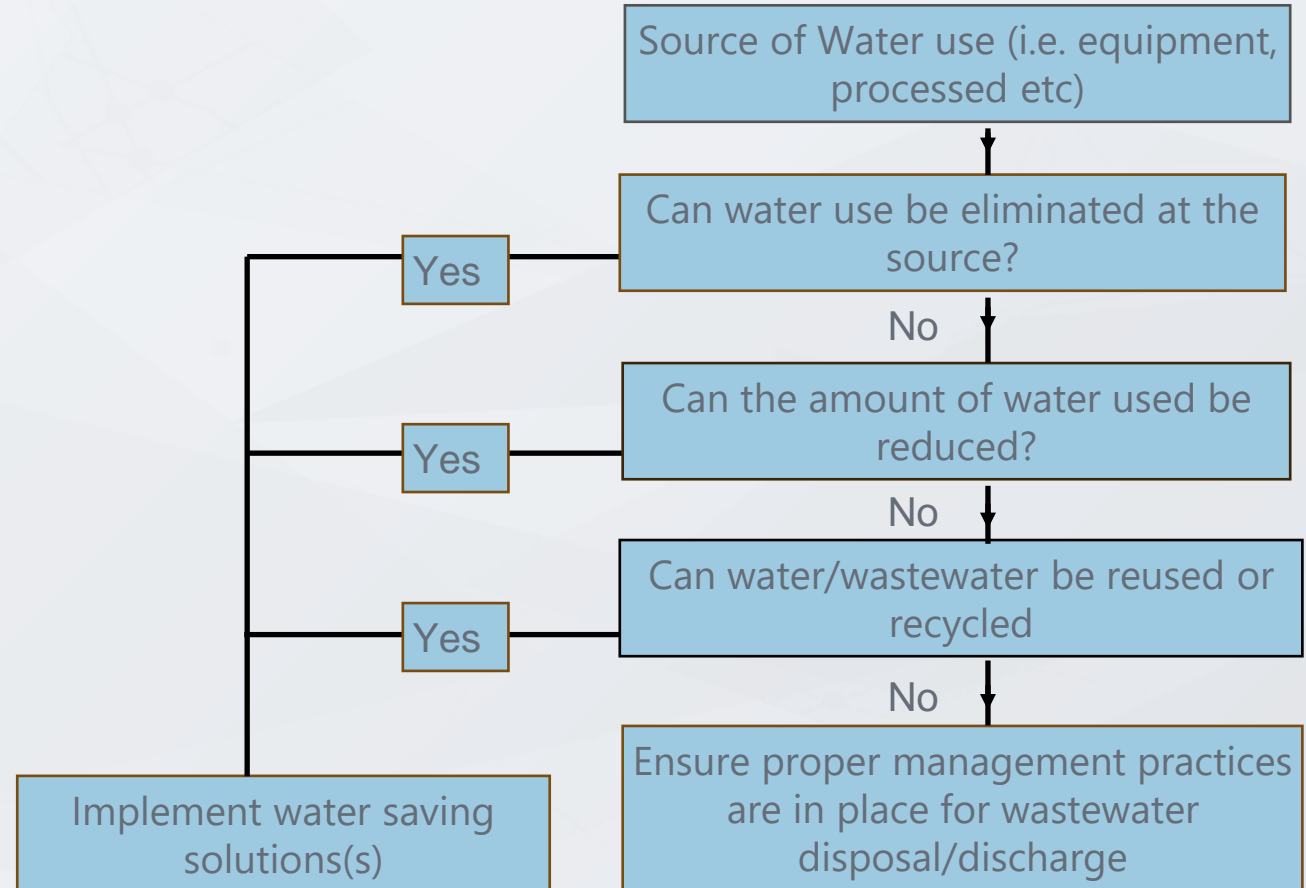
Benefit

- Once identified and pay back period is costed the facility can then decide on the plan of how to set the targets both short term and long term for water reduction

Water – Case Study

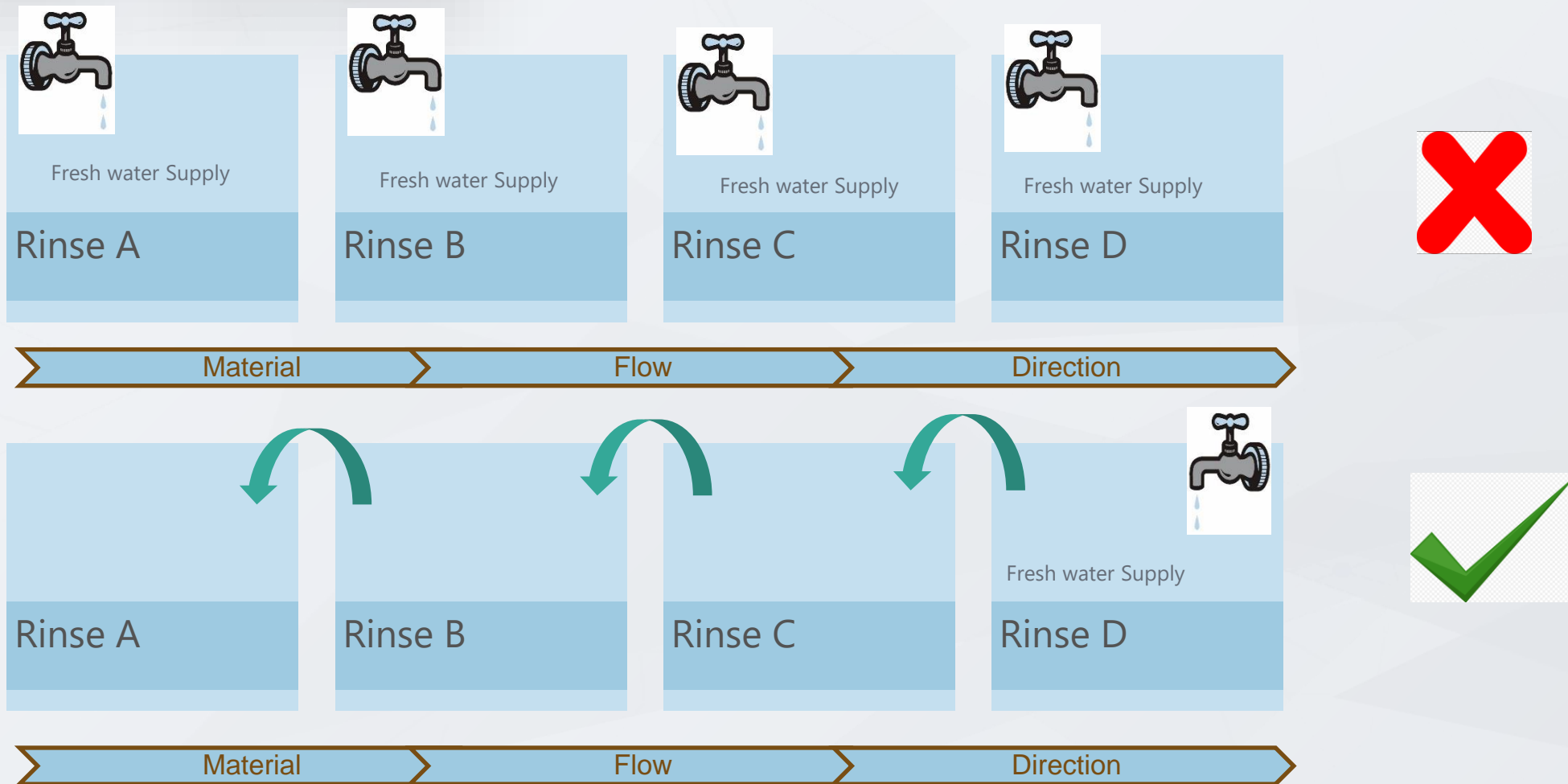
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- Each level of Hierarchy should be fully explored before moving to the next level



Source: Apparelcoalition.org

Water – Case Study



Countercurrent rinse technique

Water – Case Study

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Practice	Water Saving (Ton/Ton of Fabric)	Percentage Saving
Leak Detection, preventive maintenance, improved house keeping	0.6-3.1	1-5%
Reuse Cooling Water from Singeing	0.7-3.9	2-8.9%
Reuse Cooling Water from air compressor		
Reuse Cooling Water from preshrink		
Reuse Condensate	0.2-3.9	0.2-5.4%
Reuse process water from Bleaching	0.9-4.4	1.1-6%
Reuse process water from mercerizing		

Source: [NRDC 10 Best Practice examples for textile mills](#)

4. Waste water

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Waste water- Scoring

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Wastewater Source Identification & Tracking	25	Q7	Reporting against Wastewater Standard	50	Q9	Reuse/Recycle as a process water (Close Loop)	25
Q2	Offsite ETP Information		Q8	Offsite Wastewater Test report				
Q3	Emergency Back-up Plan							
Q4	Hazardous Sludge Disposal Procedure							
Q5	Non-Hazardous Sludge Disposal Procedure							
Q6	Septic Sludge Disposal Procedure							

Waste water – Case Study

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Challenge

- Facility has completed level1
- Facility wishes to complete Level2 with Q7 & Q8 in WW section
- Report against a waste water standard and offsite waste water test report



Solution

- Facility decides to report with ZDHC Clear Stream.
- Undertakes an assessment of process control parameters affecting the Wastewater



Benefit

- ZDHC Clear Stream is an easy-to-read facility performance report of ZDHC wastewater conformance that is accepted by leading brands. It can be shared with all customers to avoid duplicative testing.

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- [illegible]

5. Air

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Air- Scoring

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Emissions Source Identification (Operation)	25	Q6	Air Emissions Test Reports	50	Q7	Modernized Equipment to reduce Emission	25
Q2	Emission Source Identification (Production)							
Q3	Additional Refrigerant Use							
Q4	Control device/Abatement (Outdoor)							
Q5	Control device/Abatement (Indoor)							

Air Emission – Case Study - 1

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Challenge

- Generation of relevant indoor and outdoor test report for air quality to complete level 2



Solution

- Formulate a plan in place or project description to improve air quality and devise the necessary assessment.
- The plan includes list of equipment and/or process changes along with records for the change in emissions resulting from improvements made.
- Results pass the beyond compliance limits as given in FEM guidelines.



Benefit

- Completing level 2 gives the facility the opportunity of increasing the score in the section by 50 points
- Opens up next level 3 to score 25 points. .

6. Waste

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Waste- Scoring

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Identify Non-Hazardous Waste Source	25	Q8	Solid Waste Baseline	50	Q15	Hazardous waste disposal validation records	25
Q2	Identify Hazardous Waste Source		Q9	Baseline on waste disposal methods		Q16	Waste disposal and diversion process	
Q3	Segregation of Hazardous and Non-Hazardous Waste Storage		Q10	Waste reduction Target		Q17	Waste upcycle enabling circular economy	
Q4	Marking of Hazardous Waste Storage		Q11	Waste diversion Improvement Plan				
Q5	Marking of Non-Hazardous waste storage		Q12	Implementation plan to reduce waste quantity or improve type of treatment				
Q6	Policy forbidding open burning and Dumping		Q13	Waste reduction quantity/or improve type of treatment compared to baseline				
Q7	Hazardous waste handling training		Q14	Waste disposal methods improvement compared to baseline				

Waste – Case Study

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Challenge

- Facility is at Level 1
- Setting up a baseline for for the facility and identifying the waste reduction targets for achievement



Solution

- A baseline for waste generation was devised.
- A complete list of waste inventory was prepared.
- Evaluation was performed of the waste reduction with the targets set.



Benefit

- Completing level 2 gives the facility the opportunity of increasing the score in the section by 50 points
- Reduction in waste indicate the improvement in process, reduction in carbon foot print, saving of resources and ultimately saving of money.

Waste – Case Study

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- Waste Log

Non-hazardous / hazardous waste log [Company Name]																
[Company Logo]																
Ref: [Document Reference Number]																
Compiled by : [Department/ Personnel]																
Last updated/reviewed date : [Date]																
Year	Normalization factor (number of pcs or m)	Category (select)	Waste Stream (select)	Weight (kg)	Normalized Waste stream value	Destination	Category (select)	Waste Stream (select)	Weight (kg)	Normalized Waste stream value	Destination	Category (select)	Waste Stream (select)	Weight (kg)	Normalized Waste stream value	Destination
2020	200,000	non-hazardous	Paper	5,000	0.025	Recycle	hazardous	Empty chemical drums and containers		#VALUE!	Recycle	non-hazardous	Glass		#VALUE!	Recycl
2019		non-hazardous			#VALUE!					#VALUE!		non-hazardous			#VALUE!	
2018					#VALUE!					#VALUE!					#VALUE!	
2017					#VALUE!					#VALUE!					#VALUE!	
2016					#VALUE!					#VALUE!					#VALUE!	

7. Chemicals

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Chemicals- Scoring

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Level 1		Score	Level 2		Score	Level 3		Score
Q1	Chemical Inventory	25	Q14	Chemical Management Improvement Plan	50	Q17	Brands and/or chemical suppliers' collaboration to select chemicals	25
Q2	SDS Availability at Store		Q15	Reduction plan for hazardous chemical use		Q18	Chemical Hazards Assessment	
Q3	Chemical Handling Training		Q16	Prioritized list of hazardous chemicals		Q19	Lifecycle Impact analysis	
Q4	Chemical Spillage and Emergency Response Plan					Q20	Manufacturing process chemical traceability	
Q5	GHS Compliant Safety Data Sheets and PPE					Q21	Quality Assurance Program	
Q6	Chemical Hazard Signage and Safe handling Equipment					Q22	Sourcing from positive lists by contractors/subcontractors	
Q7	Chemical Purchase Policy					Q23	Commitment to new Sustainable Chemistry Innovation	
Q8	Occupational Health and Safety Program							
Q9	Marking of all Chemical Storage							
Q10	Competency of chemical responsible person							
Q11	RSL Compliant process							
Q12	MRSL compliance							
Q13	Chemical Traceability							

Chemical – Case Study - 1

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Challenge

- Facility is at Level 1
- Completing all the questions at Level 1 in chemicals management



Solution

- Devised a chemical management plan for the facility including, chemical policy, purchase policy, compliance, storage, handling, responsibilities and traceability.



Benefit

- Completing level 1 gives the facility the opportunity of going to level 2 which further open ups 50 marks to score
- Implementation of chemical management helps organization to save on chemicals which helps to reduce load on ETP and ultimately improve the environment .

Chemicals – Case Study -1

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- How to Manage Chemicals
- Prepare chemical Inventory with All chemicals used in manufacturing processes (including chemicals in production and wastewater treatment plant chemicals where applicable)
- All chemicals used in tooling/equipment (spot cleaners, lubricants and grease)
- All chemicals used to operate and maintain the facility (aside from WWT which is captured above).



Chemicals – Case Study -1

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- Chemical Inventory

MANDATORY																				
Chemical formulation (English)*	Chemical formulation (Local)*	Chemical formulator (English)*	Chemical formulator (Local)*	Chemical formulator type*	ZDHC use category *	CAS No.	Colour Index	Amount onsite*	Amount onsite (unit)*	Monthly usage	Monthly usage (kg)	Annual Consumption (kg/year)	% mass of Substances in SVHC Candidate list?	Do you have an MSDS/SDS ?*	Compliant with latest version of ZDHC MRSL?	Support document for ZDHC MRSL finding	Certifications	Expiry dates of certifications	MSDS/SDS issue date.	

Hazard classes from MSDS/SDS based on GHS & CLP					Environmental Indicators																
Hazard Statement (H)	Precautionary Statement (P)	GHS Classification	Use of PPE	Biological degradation and/or elimination in % and test method	COD	BOD5	Permanent halogen organic compounds in %	Acute aquatic toxicity, species, test norm and result	Heavy metal in %	Storage condition requirement	Place of storage/building/ room	Delivery amount	Delivery amount (unit)	Delivery date	Delivery invoice reference	Chemical tests performed	Dates of chemical tests	Chemical test results against MRSL requirements	Chemical testing laboratory	Details on compliance with Brand RSLs or Brand specific requirements	Disposal of chemical

Source: Partnership of Sustainable textiles

Questions

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Higg FEM Training & Verification Offer

Our Training Offer

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Our Webinar Topics At a Glance

- Materiality Assessment
- Sustainability Strategy
- Higg FEM Training
 - Basic
 - Advanced
- Introduction to the Higg Index
- Material and Product Certifications
- Sustainable Supply Chain Management
- Climate Change



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Our Verification Offer

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- On site verifications
- Off site verifications
- Group offers covering a number of sites



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